

Thomas first gave a brief summary about the just finished PAC conference. The discussion was then focused on the polarization measurements done at $G\gamma = 7.5$ flattop. Leif plotted polarization vs. intensity for last one week. The intensity dependence shows different slopes for cold snake on and off, and the polarization is lower than expected for the cold-snake-on case. The difference between cold snake on and off is larger than the effect from spin mismatch. This triggered a hunting for all possible polarization loss mechanisms. A relative flat vertical polarization profile suggests that it is not a first order intrinsic resonance effect if any. For higher order resonances such as sextupole driven resonances (helical snake is a major source of sextupole component), both horizontal and vertical motion/emittance would be involved. This may make it harder to see a polarization profile in one plane (vertical or horizontal). The emittance taken did not show much change between high and low intensities, which makes it hard to explain the intensity effect by emittance change (consequently changing the resonance strength). To see if the low polarization is only associated with the low energy ($G\gamma = 7.5$) flattop, Haixin is going to search through all the ramp measurements in the past, which also gave polarization at $G\gamma = 7.5$. Woody also suggested to look the radial components. The bottom line is that if there are some resonances around this region ($G\gamma$ from 4.5 to 7.5), injection-on-the-fly technique should speed up the resonance crossing speed and greatly reduce the effect. The technique has been tested in run6.

Haixin